

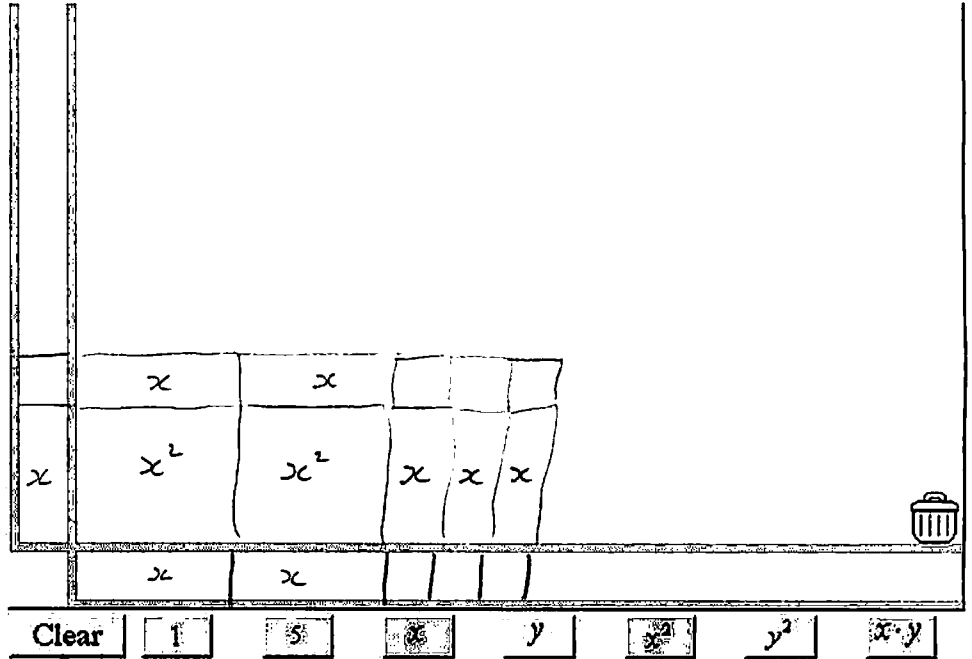
## Unit 9 Quiz #1

No calculator. Please circle your answer.

1. Open the distributive law applet on your computer and model the product  $(2x + 3)(x + 1)$ . Sketch the rectangles and give the answer.

Answer:

$$2x^2 + 5x + 3$$



2. Simplify. Express the answer in standard form.

$$(4x^5 - 2x^3 - 5x - 3) - (x - 3x^2 + 5x + 3)$$

$$4x^5 - 2x^3 - 5x - 3 - x + 3x^2 - 5x - 3$$

$$4x^5 - 2x^3 + 3x^2 - 11x - 6$$

3. Write in scientific notation.

9,800,000,000

$$9.8 \times 10^9$$

4. Give an example of the given polynomial.

quadratic trinomial

$$ex/ 2x^2 - 7x + 5$$

5. Find the sum.

$$(2y^3 + y^2 + 1) + (4y^3 - y^2 + 5)$$

$$6y^3 + 6$$

6. Use the Distributive Property to find the product.

$$x(-x+6)$$

$$-x^2 + 6x$$

7. Use the Distributive Property to find the product.

$$(a-5)(a+5)$$

$$a^2 + \cancel{5a} - \cancel{5a} - 25$$

$$a^2 - 25$$

DOTS!

8. Use the Distributive Property to find the product.

$$(4m-1)(5m-4)$$

$$20m^2 - 16m - 5m + 4$$

$$20m^2 - 21m + 4$$

9. Use the Distributive Property to find the product.

$$(a+c)(a+3c)$$

$$a^2 + 3ac + ac + 3c^2$$

$$a^2 + 4ac + 3c^2$$

10. Find the product.

$$(3x-4)^2$$

$$= (3x-4)(3x-4)$$

$$= 9x^2 - 12x - 12x + 16$$

$$= 9x^2 - 24x + 16$$

PST!

11. Simplify the expression.

$$\left(\frac{x^2}{y^4}\right)^3 = \frac{x^6}{y^{12}}$$

Beware of careless errors! Go back and check your answers carefully...